IN THE CLAIMS:

1. (Currently Amended) A node ~~, in~~ for use in a WDM optical communication system that includes a plurality of nodes interconnected by communication links, the node comprising:

a first plurality of transponders each generating and/or receiving an information-bearing optical signal at a different channel wavelength from one another;

an optical coupling arrangement transferring the channel wavelengths between a link connected to the node and the first plurality of transponders, said arrangement being adaptable to reconfigure its operational state to selectively direct different ones of the channel wavelengths from the link to different ones of the transponders without disturbing the optical path through the node traversed by any other channel wavelengths,

wherein said optical coupling arrangement includes a tunable coupling arrangement for selectively transferring the different ones of the channel wavelengths from the link to the first plurality of transponders and a passive coupling arrangement for directing the channel wavelengths from transponders to the link, said optical coupling arrangement further including a reconfigurable optical switch having at least three ports, said reconfigurable optical switch being adaptable to reconfigure its operational state to receive at a plurality of the ports any of the channel wavelengths at which the first plurality of transponders operate and direct said channel wavelengths to any remaining ones of the ports of the optical switch; and

a communications and configuration arrangement transferring data identifying the respective channel wavelengths at which the transponders operate from the transponders to the optical coupling arrangement and, in response to the transferred data, reconfiguring the operational state of the optical coupling arrangement.

2. (Previously Presented) The node of claim 1, wherein the first plurality of transponders respectively include a plurality of receivers receiving the information-bearing optical signals, and further wherein the communications and configuration

arrangement reconfigures the operational state of at least the portion of the optical coupling arrangement transferring the channel wavelengths from the link to the first plurality of transponders so that the transponders can receive optical signals at the channel wavelengths at which they respectively operate.

3. (Previously Presented) The node of claim 1, wherein said transponders each include an identifying element containing data identifying the respective channel wavelengths at which the transponders operate, said optical coupling arrangement having a receiving element for obtaining the data contained in the identifying element.

4-6. (Canceled)

7. (Original) The node of claim 1, further comprising a second plurality of transponders serving as backup transponders in the event of a failure in one or more of the transponders in the first plurality of transponders.

8. (Previously Presented) A node, for use in a WDM optical communication system that includes a plurality of nodes interconnected by communication links, the node comprising:

a first plurality of transponders each generating and/or receiving an information-bearing optical signal at a different channel wavelength from one another;

an optical coupling arrangement transferring the channel wavelengths between a link connected to the node and the first plurality of transponders, said arrangement being adaptable to reconfigure its operational state to selectively direct different ones of the channel wavelengths from the link to different ones of the transponders without disturbing the optical path through the node traversed by any other channel wavelengths;

a communications and configuration arrangement transferring data identifying the respective channel wavelengths at which the transponders operate from the transponders to the optical coupling arrangement and, in response to the transferred data, reconfiguring the operational state of the optical coupling arrangement; and

further comprising a second plurality of transponders serving as backup transponders in the event of a failure in one or more of the transponders in the first plurality of transponders,

wherein said optical coupling arrangement includes at least two reconfigurable optical switches each having at least three ports, a first of said reconfigurable optical switches being adaptable to reconfigure its operational state to drop channel wavelengths to the first plurality of transponders and receive channel wavelengths from the second plurality of transponders, a second of said reconfigurable optical switches being adaptable to reconfigure its operational state to drop channel wavelengths to the second plurality of transponders and receive channel wavelengths from the first plurality of transponders.

9. (Currently Amended) The node of claim 7 ~~1~~, wherein the first and second plurality of transponders are arranged in transponder pairs comprising transponders from each of the first and second plurality of transponders.

10. (Previously Presented) The node of claim 9, wherein the transponders in each of the transponder pairs are located in adjacent slots in electrical connection with one another for transferring electrical data signals therebetween.

11. (Previously Presented) The node of claim 10, wherein the transponders in each of the transponder pairs operate at a common channel wavelength.

12. (Canceled)

13. (Previously Presented) The node of claim 10, wherein, the transponders in at least one of the transponder pairs are operable at either a common channel wavelength or a different channel wavelength.

14-15. (Canceled)

16. (Currently Amended) A node ~~, in~~ for use in a WDM optical communication system that includes a plurality of nodes interconnected by communication links, the node comprising:

a first plurality of transponders each generating and/or receiving an information-bearing optical signal at a different channel wavelength from one another;

an optical coupling arrangement transferring the channel wavelengths between a link connected to the node and the first plurality of transponders, said arrangement being adaptable to reconfigure its operational state to selectively direct different ones of the channel wavelengths from the link to different ones of the transponders without disturbing the optical path through the node traversed by any other channel wavelengths; and

a communications and configuration arrangement transferring data identifying the respective channel wavelengths at which the transponders operate from the transponders to the optical coupling arrangement and, in response to the transferred data, reconfiguring the operational state of the optical coupling arrangement,

wherein said optical coupling arrangement includes at least two passive coupling arrangements and two reconfigurable optical switches each having a plurality of ports, wherein a first transponder in each of the transponder pairs sends and receives channel wavelengths from a first of the passive coupling arrangements and a first of the optical switches associated therewith and a second transponder in each of the transponder pairs sends and receives channel wavelengths from a second of the passive coupling arrangements and a second of the optical switches associated therewith.

17. (Previously Presented) The node of claim 1, further comprising a blocking filtering element for filtering from the link channel wavelengths dropped by the optical coupling arrangement.

18. (Currently Amended) The node of claim 1 ~~5~~, further comprising a blocking filtering element for filtering from the link channel wavelengths dropped by the optical coupling arrangement.

19. (Currently Amended) The node of claim 18 ~~8~~, wherein the blocking filtering element is the second reconfigurable optical switch.

20. (Previously Presented) The node of claim 3, wherein the identifying element is a serial or model number and the receiving element is an alphanumerical input through which the data is manually received.

21. (Previously Presented) The node of claim 3, further comprising means for communicating the data from the identifying element in the transponders to the node.

22. (Previously Presented) The node of claim 3, wherein the identifying element is a memory module and the receiving element includes a processor for reading the data from the memory module when the transducer is coupled to the optical coupling arrangement.

23. (Currently Amended) The node of claim 1 ~~5~~, wherein the first plurality of transponders are respectively located in a plurality of transponder slots each of which optically communicates with a predetermined one of the ports of the optical switch.

24. (Previously Presented) The node of claim 1, wherein the data identifying the respective channel wavelengths at which the transponders operate is the respective channel wavelengths themselves.

25-61. (Canceled)

62. (Currently Amended) A node ~~, in~~ for use in a WDM optical communication system that includes a plurality of nodes interconnected by communication links, the node comprising:

a first plurality of transponders each generating and/or receiving an information-bearing optical signal at a different channel wavelength from one another;

an optical coupling arrangement transferring the channel wavelengths between a link connected to the node and the first plurality of transponders, said arrangement being adaptable to reconfigure its operational state to selectively direct different ones of the channel wavelengths from the link to different ones of the transponders without disturbing the optical path through the node traversed by any other channel wavelengths; and

a communications and configuration arrangement transferring data identifying the respective channel wavelengths at which the transponders operate from the transponders to the optical coupling arrangement and, in response to the transferred data, reconfiguring the operational state of the optical coupling arrangement,

wherein said optical coupling arrangement includes at least two reconfigurable optical switches each having a plurality of ports and a passive coupler having an input port receiving channel wavelengths from the link and first and second output ports respectively coupled to ports of the two reconfigurable switches such that a first of the reconfigurable optical switches serves as a drop switch selectively directing different ones of the channel wavelengths from the link to different ones of the transponders and further such that a second of the reconfigurable optical switches serves as an add switch selectively directing different ones of the channel wavelengths from the transponders to the link, whereby at least one given channel wavelength can be both dropped by the drop switch and transmitted back to the link by the add switch.

63. (Previously Presented) The node of claim 62, wherein said given channel is a broadcast channel.

64. (Previously Presented) The node of claim 62, wherein said given channel is a dual homing path protection channel.

65. (Canceled)